

2014 Highlights from Zooniverse: Research with One Million Citizen Scientists - by Grace Wolf-Chase, Ph.D. (gwolfchase@adlerplanetarium.org)

In the multi-disciplinary spirit of astrobiology, this month we'll look at Zooniverse, a suite of online citizen science initiatives, which currently number over two-dozen projects in space science, climate, nature, biology, physics and the humanities¹. Through the Zooniverse website, people from all walks of life around the world (citizen scientists) contribute to cutting-edge scientific research – no special skills are necessary. You can go to the website right now and create yourself a user account if you don't already have one. Curiosity is strongly encouraged, but even if you think you don't possess an ample supply, you might surprise yourself once you start to participate! Since Zooniverse crossed the threshold of 1 million citizen scientist volunteers in 2014, it seems appropriate to end the year with a few highlights.

As diverse as they are, Zooniverse projects share one thing in common – they need the participation of large numbers of people using their eyes or ears to mine data in ways that are beyond the present capabilities of computers. Citizen scientists engage in diverse tasks such as transcribing weather data from ships at sea between 1850 and 1950 to help scientists studying climate, classifying cell images to contribute to cancer research, or examining ancient Greek texts in the Oxyrhynchus collection, to name just a few activities. To date, Zooniverse projects have resulted in over 70 peer-reviewed scientific publications². Participants are collectively acknowledged in these publications and a few have even achieved co-authorship for critical new discoveries, such as the “green peas”, *Hanny's Voorwerp*, and the first exoplanet in a quadruple star system³. Check out my blog on the Milky Way Project “yellowballs”, a new class of objects identified by citizen scientists⁴. The Astrophysical Journal accepted the paper that was based on our research into the nature of these objects earlier this month.

In other news, we are preparing for “Clergy Day” on Tuesday, Feb. 10th, 2015, when clergy and lay leaders will receive free admission and shows at the Adler Planetarium in Chicago, and have opportunities for discussion and Q&A with scientists. We intend this to be an annual event, scheduled shortly before Evolution Weekend, to inspire and provide materials for reflection so those able to attend can share their experiences with their congregations. Like the philosophy that motivated creating Zooniverse, we believe that science is for everyone, and we are committed to providing a welcoming, inclusive climate to all. If you live near Chicago, please consider visiting us!

Wishing you all a happy & healthy 2015,

Grace

¹ www.zooniverse.org

² www.zooniverse.org/publications

³ See the *Galaxy Zoo* and *Planethunters* projects.

⁴ www.adlerplanetarium.org/blogs/milky-way-project